

SOME PRINCIPLES OF ALGONQUIAN WORD-FORMATION

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INTRODUCTION

This paper deals with an exposition of some of the principles of word formation in a dialect of the central group of Algonquian Indians. By central group is meant the Algonquian tribes that live or have lived about the Great Lakes, particularly in the adjoining regions west and south and now embraced by the territory of the states of Michigan, Minnesota, Wisconsin, Illinois, Indiana, and Ohio. The group contains many dialects, some of which are the Ojibwa, Ottawa, Potawatomi, Menomini, Kickapoo, Sauk, and Fox.

The dialects present great similarity in the absolute forms of many words, but marked differences are noticed in the spoken language. Some of the differences are so wide as to make many of the dialects mutually unintelligible. This lack of mutual comprehension is due in some measure to variations of intonation and idiom and in a certain degree to slight differences of phonetics and grammatical forms. The extent of diversity among the dialects varies. For instance, Ojibwa, Ottawa, and Potawatomi are so closely related that a member of any one of the three experiences only a slight difficulty in acquiring a fluent use of the other's dialect. The transition from Ojibwa, Ottawa, and Potawatomi to Menomini is wider, and it is farther still to Kickapoo and to Sauk and Fox.

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Some of the dialects, like the Ojibwa, Ottawa, and Potawatomi, are disintegrating. The breaking up is not uniform throughout a dialect; it is faster in the regions where civilized influences predominate or play a controlling force, while the purer forms are maintained in the places where ideas of the old-time life and associations have a chance to live and survive. The dialect of the Mexican band of Kickapoos is holding its own with great vigor, but not quite the same can be said for Menomini or Sauk. Sauk and Fox are the same speech with feeble differences of intonation and idiom. Kickapoo is closely akin to both, but is a little way removed from them by slight differences of vocabulary, intonation, and idiom. The dialect taken up here is the Fox, which is spoken with as much purity as Kickapoo.

The number of the Foxes is nearly four hundred and they live on Iowa river at a place in Tama county, Iowa. They call themselves Meskwá'kí'ágⁱ, *Red-earth People*, and are known to the Ojibwas and others of the north as Utagāmìg, *People of the Other Shore*. Among their totems is an influential one called the Fox. It is told in tradition that members of this totem were the first in the tribe to meet the French; that the strangers asked who they were, and the reply was Wá'gō'ágⁱ, *People of the Fox Clan*; so thereafter the French knew the whole tribe as Les Renards, and later the English called them Foxes, a name which has clung to them ever since.

Random attempts have been made at various times to collect a vocabulary of the dialect, but nothing has ever been done to elucidate its structural peculiarities. In the work on the dialect, not only in the particular phase taken up here, but in all its other aspects abundant help has been given by Professor Franz Boas, of Columbia University. The inquiry was conducted under his direction and the results attained have largely come about by following lines suggested and advised by him.

THE SOUNDS

Before entering on the main theme of the paper, it seems best to give an account of the principal sounds used in the dialect and to show something of what takes place in the process of sound change. The analysis of sounds is as follows:

Consonants

ʔ A phonetic symbol standing for a softened glottal stop. The nature of the sound is caught in a feeble whispered cough. The sign is elevated and occurs before initial vowels: ʔa'tci¹ *lacrosse stick*.

' An apostrophe denoting a whispered continuant before the articulation of *k*, *t*, and *p*. It occurs also before *h*. It will be referred to again under these four symbols.

h An aspirate sound almost like *h* in *hall*, *hail*, *hull*. It is soft breath with feeble friction passing the vocal cords and continuing on through the narrowed glottis: na*h*i, *hey! listen!*

'*h* An aspirate of the same origin as *h* but without an inner arrest. The tongue is drawn back and raised high, making the air passage narrow; it has a sudden release at the moment almost of seeming closure: ma'hwaw^a, *wolf*.

hw A bilabial, aspirate glide, starting at first like *h* and ending with the air passage wider and the ridge of the tongue slightly lowered: pa*na*hwaw^a, *he missed hitting him*.

k Like the inner *k*-sound in *caw*, *crawl*. The stoppage makes and bursts without delay on the forward part of the soft palate: ka*h*o, *hist!*

g A *k*-sound articulated in the same position as *k*. But the closure is dull and sustained, with a pause between the stop and break, leaving an acoustic effect of almost a medial sonant: a'gwⁱ, *no*.

'*k* An outer *k*-sound like the one in *keen*, *keep*, *key*. The articulation is farther front than for *k* or *g*. The apostrophe is for a hiss of breath that escapes before complete closure: i'kwaw^a, *woman*.

c Like the voiceless *sh* in *she*, *shame*, *mash*. The sibilant is made with friction between the tongue and upper alveolar. The opening is narrow and the tip of the tongue is near the lower teeth: ca'skⁱ, *only*.

s A hissing surd articulated with the tip of the tongue against the lower teeth. The air passage is narrow and without stop: wa'sesi^a, *bull-head*.

tc Like *ch* in *chill*, *cheap*, *church*. The articulation is with the ridge of the tongue behind the upper alveolar while the blade is near the lower alveolar: tci'stca^o or tcistca^o, *heavens and earth!*

t A pure dental surd articulated with the point of the tongue against the upper teeth and with sudden stress: tetépisaw^a, *he whirls round*.

d A dental articulated in the same place as *t*, but delayed and with less stress. It leaves the impression of almost a voiced stop: mé*d*awⁱ, *ten*.

'*t* A dental surd differing from *t* only in the fact that an audible hiss is expelled just previous to a full stop: mé'tāⁱ, *bow*.

l A lateral liquid sometimes heard in careless speech. It often replaces the nasal *n* after *u*, *a*, and the dull *q*. The point of the tongue articulates softly with the upper alveolar, the friction being so slight that the sound has much the nature of a vowel. It is like *l* in *warble*: wa'bigu*l*ū^a for wa'bigunū^a, *mouse*.

n Not quite like the *n* in English, the difference being in the mode of articulation, which is with the point of the tongue at the base of the upper teeth: n'i*n*^a, *I*.

m A bilabial nasal consonant like *m* in English: ma*n*^a, *this*.

p A surd like the sharp *p* in English; it is made with complete closure and the stop usually breaks with a slight puff of breath: pyā'w^a, *he comes*.

b A bilabial stop with almost the value of a sonant; it differs from *p* in being dull and having less stress. The lips close and are momentarily sustained as if for a sonant, but break the stop with a breath: wa'ba*n*ⁱ, *morning light*.

'p Like *p* but with the difference of having first to expel a puff of breath before coming to complete closure : ā''pyātc¹, *when he came*.

y Like the voiced spirant *y* in *you, yes*. It is uttered without stress : wā'tcīyāni, *whence I came*.

w Bilabial liquid like the English *w* in *war, water* : wāwī'gewāg¹, *at their dwelling place*.

A tabular view of the consonants can thus be shown :

	SURD.	SPIRANT.	NASAL.	LATERAL.
Glottal	ʔ	—	—	—
Post-palatal	k, g	—	—	—
Palatal	'k	—	—	—
Alveolar	—	c s	—	l
Dental	t, 't, d	ts, tc	n	—
Labial	p, 'p, b	—	m	—
		h, w, y		

Vowels

ū As the vowel sound in words like *loon, yule, you, and clue*. It is long and slightly rounded ; the ridge of the tongue is high and back, and the lips and teeth have a thin opening : ū'wiyā^a, *somebody*.

u Like the *u* sound in *full and book*. The vowel is short, open, and faintly rounded. It is the short of ū : pyā'tusāw^a, *he comes walking*.

ō As *o* in words like *no, slope, rose*. The vowel is long and slightly less rounded than ū ; the ridge of the tongue is not so high and not so far back as for ū : ā'mōw¹, *honey*.

o Like *o* in *fellow and hotel*. It is the short sound of ō : nōtā'gosiwa, *he is heard*.

a Like the short vowel sound in words like *not, plot, what*. The vowel suffers further shortening in final syllables ; it is uttered with the ridge of the tongue drawn back ; the lips are passive : náhusāw^a, *he can walk*.

ā Like the vowel sound in *sun, hut* ; it is short, dull, unrounded, and made with the ridge of the tongue slightly lifted along the front and back : mən¹, *this*.

ā As in the broad vowel sound of words like *all, wall, law, awe*. The ridge of the tongue is low and pulled back almost to the uvula ; the lips make a faint attempt to round : wā'bamōn¹, *mirror*.

ā As in the vowel sound of words like *father, alms*. The tongue lies low, back and passive ; the lips open listlessly and only slightly apart : māhan¹, *these*.

ā Longer than the *a* in *sham, alley*. The ā in German *bär* is probably more nearly akin. It is broad and made with the tongue well forward ; the opening of the lips is slightly wider than for ā ; the quantity is in fact so long as to be diphthongal. The first part of the sound is sustained with prolonged emphasis, while the second is blurred and falling. The character of this second sound depends upon the next mold of the voice-passage : mā'nāw^a, *there is much of it*.

ē Like the *a*-sound in *tale, ale, late*. It is made with the ridge of the tongue near the forward part of the palate ; the lips open out enough to separate at the corners, but the rift there is not clear and sharp : nahē¹, *hark !*

e Like the vowel sound in *men, led, let*. It is a shorter sound of ē : pémi¹, *oil, grease*.

ī With much the character of the diphthong in words like *see, sea, tea, key*. It is the most forward of all the vowels; the opening of the lips is lifeless: nī'nā, *I*.

i Like the *i* in *sit, miss, fit*. It is the short of ī; it is even shorter as a final vowel: āicimitē, *just as he told me*.

Diphthongs

Not more than two vowels combine to form a diphthong. Stress is stronger on the leading member and movement of the voice is downward from the first to the second vowel:

ai Like the diphthong in *my, I*: aī'kwīwā, *he is tired*.

ai Like the diphthong in *turn*, with the *r* of the word slurred: āsai, *skin*.

ei Like the diphthong in *day, play*: nahēi, *now then!*

āi Like the diphthong in *soil, boy*: mā'ināhwāwā, *he went at him*.

au Like the diphthong in *shout, bout*: hau, *hello!*

ou Like the diphthong in *foe, toe*: pyānōu, *come here!*

The analysis brings out certain essential features. In the first place there is a preponderance of forward sounds. There is lack of sharp distinction between *k, t, p*, and their parallels *g, d, b*. The first set leave no doubt as to their being unvoiced sounds; their acoustic effect is a direct result of their organic formation. The same is not true with the second set; they form for voiced articulation, but their acoustic effect is plainly that of surds; when the sonant effect is caught by the ear it is of the feeblest sort. Sometimes *l* is substituted for *n* in careless speech. Vowels are not always distinct, especially when final. There is weak distinction between *w* and *y*, both as vowel and as consonant.

Externally the language gives an impression of indolence. The lips are listless and passive. The widening, protrusion, and rounding of lips are excessively weak. In speech the expiration of breath is uncertain; for instance, words often begin with some show of effort, then decrease in force, and finally die away in a lifeless breath. Such is one of the tendencies that helps to make all final vowels inaudible; consequently modulation of the voice is not always clear and sharp.

The same lack of clearness and indistinctness is carried out in continued discourse, in fact it is even increased; enunciation is blurred and sounds are elusive, yet it is possible to indicate something of the nature of *length, force, and pitch* of sounds.

Quantity

Vowels vary for length, and in the analysis of sounds they have their phonetic symbols indicating quantity. A vowel with the sign $\bar{}$ over it is long, as $\bar{o}$, $\bar{u}$, $\bar{a}$, and $\bar{i}$, and a vowel without the sign is short. Some vowels are so short that they indicate nothing more than a faint puff of breath. The short, weak quantity is the normal quantity of the final vowel, and for that reason is in superior letter, as a , i . Rhetorical emphasis can render almost any vowel long,—so long that the vowel sound usually develops into a diphthong, as $\bar{a}gw\bar{e}^i$, *why, no, of course!* from $\bar{a}gw^i$ *no*.

Change of quantity is often due to position. Long vowels are likely to suffer loss of quantity at the beginning of long combinations: $n\bar{a}^k$ *again*, becomes in the phrase $n\bar{a}^k\bar{a}t\bar{c}\bar{a}m\bar{e}g\bar{u}t\bar{a}t\bar{a}g\bar{i}$ *again it certainly seemed as if*. Long vowels also shorten when placed before a stressed syllable: $\bar{a}^i k\bar{i}g^i$ *on the ground* becomes $\bar{a}^i k\bar{i}g\bar{a}^i h\bar{i}n\bar{a}b\bar{i}t\bar{c}^i$ *when he looked down at the ground*.

Diphthongs undergo change of quantity. The accent of a diphthong slides downward from the first vowel, and the loss when it comes is in the breaking off of the second member: $\bar{a}^i s\bar{a}^i$ *buckskin*, $n\bar{e}t\bar{a}s\bar{a}m^i$ *my buckskin*.

Consonants show evidence of quantity also. In general the quantity is short but the length of time between the stop and break in g , d , and b is noticeable, so much so that the effect of a double sound is felt. As a matter of fact g stands for a double sound. The first part is an articulation for an inner k and in gliding forward comes to the place for g where the stoppage breaks. Assimilation tends to reduce the double to a single sound. Nasal sonant m and n sound double before accented $\bar{i}$: $m\bar{i}^i m\bar{i}w^a$ *pigeon*, $n\bar{i}^i na$ *I*.

A syllable consists (1) of a single vowel sound, $\bar{a}$; (2) of two or more vowels joined together into a diphthong, $w\bar{a}i$, *what?*; and (3) of a vowel sound in combination with a single consonant or a cluster of consonants, the vocalic sound always following the consonant: $n\bar{i}^i t\bar{c}i$, *my kind*. Two or more vowels coming together, no two of which are in union as a diphthong, are broken by an interval between: $\bar{a}h\bar{i}w\bar{a}t\bar{c}i$ *so they said*.

Stress

Force is but another name for stress and indicates energy. It is not possible to lay down definite rules for the determination of stress in every instance, and it is not always clear why some syllables are emphasized at the expense of others. Generally, in words of two syllables, stress accent falls on the first: *kí'n^a thou*; for words of three syllables stress falls on the antepenult: *kwí'yen^a sufficiently*. Beyond words of three syllables only the semblance of a rule can be suggested. The chief stress comes on the first or second of the initial syllables, and the secondary stress on the penult; the syllables between follow either an even level or more often a perceptible rise and fall alternating feebly up to the penult. In accordance with its rising nature the principal stress can be considered as acute (´), and in the same manner the fall of the secondary stress can be termed as grave (`). The sonorous tone of the voice on the penult is marked, due perhaps to the extreme brevity of the final, inarticulate vowel. The feature of the sonorous penult is apparent in extended combinations like phrases and sentences, especially when movement is swift at the start, and, gradually slowing up on the way, brings up at the syllable next to the last with a sustained respite which ends with a sudden break into the final vowel. The arrival on the penult creates one or two effects according as the syllable is long or short. If the quantity is long, the vowel is sung with falling voice; if short, the vowel is brought out with almost the emphasis of a primary stress accent.

This makes a fairly normal order for stress in a single group standing alone; but it suffers interference in the spoken language where the measure of a syllable for special stress often becomes purely relative. The stress on one syllable brings out a certain particular meaning and on another gains an effect of a different sort. Stressing the stem of *wâ'báminu look at me* exaggerates the idea of *look*; stressing the penult *-mí-*, the syllable of the object pronoun, centers the attention on that person; and stressing the final member *-nú thou* makes the second personal subject pronoun the object of chief concern.

Special stress often splits a vocalic sound into two vowels of the same or a different kind. This is common in the case of pronouns,

in words of introductive import, in vocatives of spirited address, and in cries calling at a distance: *i'mⁱ* for *i'nⁱ* *that*; *naheⁱ* for *nahⁱ* *hark*; *neniwetig^ei* for *neniwetig^e* *O, ye men!*; *pyāgō^u* for *pyā'k^u* *come ye*.

Pitch

This Algonquian dialect does not fall wholly in the category of a stressed language. Pitch is ever present in a level, rising, or falling tone. The effect of pitch is strong in the long vowels of the penult. Temperament and emotion bring out its psychological feature. For instance, pride creates a rising tone and a feeling of remorse lets it fall. In the sober moments of a sacred story the flow of words glides along in a musical tone; the intonation at times is so level as to become a tiresome monotone; again it is a succession of rises and falls, now ascending, now descending, and with almost the effect of song. In general, the intonation of ordinary speech is on a middle scale. The tone of men is lower than that of women and children.

Pronunciation

Most of the vowels are easy enough to pronounce. Articulation of consonants offers little or no difficulty, unless perhaps it is to hold the point of the tongue on the upper teeth for *n*, *t*, and *d*, and on the lower for *s*, *c*, *tc*, and *ts*. The language is not fond of consonant clusters. In the list that follows are shown about all of the various combinations. Most of them are with *w* and *y* and so are not types of pure clusters of consonants:

Consonant Combinations

kw	<i>kwⁱyen^a</i> <i>exactly</i> .	bw	<i>ābwātcigānⁱ</i> <i>roasting-spit</i> .
gw	<i>ā'gwⁱ</i> <i>no</i> .	ky	<i>kekyā'nenāmw^a</i> <i>he holds it</i> .
'kw	<i>i'kwāw^a</i> <i>woman</i> .	gy	<i>ūgyānⁱ</i> <i>his mother</i> .
hw	<i>keci'kahwāw^a</i> <i>he stabs him</i> .	'ky	<i>ā'kyānⁱ</i> <i>lands</i> .
'hw	<i>mā'hwāw^a</i> <i>wolf</i> .	cy	<i>mé'tegumicyānⁱ</i> <i>oaks</i> .
sw	<i>médās^w</i> <i>ten</i> .	my	<i>myā'wⁱ</i> <i>road</i> .
cw	<i>mécwā^a</i> <i>rabbit</i> .	ny	<i>nyā'wⁱ</i> <i>four</i> .
tw	<i>āt^wi</i> <i>ouch!</i>	py	<i>pyā'w^a</i> <i>he comes</i> .
mw	<i>ām^wāw^a</i> <i>he eats him</i> .	'py	<i>ā'pyāt^c</i> <i>when he comes</i> .
nw	<i>nō'ten^w</i> <i>wind</i> .	sk	<i>cā'skⁱ</i> <i>only</i> .
pw	<i>p^wā'wⁱ</i> <i>not</i> .	ck	<i>mācicki^w</i> <i>grass</i> .
'pw	<i>ū'pwāgānⁱ</i> <i>pipe</i> .	stc	<i>tcistcā^e</i> <i>my stars!</i>

SOUND CHANGE

ACCRETION

In the course of word-formation phonetic elements are taken on that have the impress of mere accretions. The additions are the result of various causes: some are due to reduplication, some to accent, and others act as glides between vowels and as connectives between unrelated portions of a word group. Instances of the accretion of some of these phonetic elements are next to be shown.

A syllable usually in the initial position is sometimes repeated by another which precedes and maintains the same vowel sound. The repetition is in fact a reduplication:

í'ni wăyătúgemèg^u and so in truth it may have been, for í'ni yătúgemèg^u.

It is not always clear if some accretions are but glides passing from one sound to another or only additions to aid in maintaining stress accent on a particular syllable. The syllable *hu* is a frequent accretion in dependent words and occurs immediately after the temporal article *ā*:

āhugú'kahigāwātē^t when they made a bridge is the conjunctive for kú'kahigāwāg^t they made a bridge.

āhuképiskwāwāwāhōniwētē^t which they used as a flap over the entry-way is a subordinate form of kēpiskwāwāwā'hōnāmōg^t they used it for a flap over the entrance.

Other additions, like *h*, *w*, *y*, are clearly glides:

ā'kutētc^t whence he came, the independent form of which is útēw^a he came from some place.

ā'hunāpāmētc^t when she took a husband, a temporal form for unā'pāmēw^a she took a husband.

ōwīwān^t his wife, from owī-ānī.

owī'tāwān^t his brother-in-law, from owī'tā-ānī.

ketāsīyūtāw^a he crawls up hill, from ketāsī-ūtāwā.

kī'yāwāw^a he is jealous, from kī-āwāwā.

A frequent type of accretion is *w* or *y* with *k* forming a cluster:

tcā'kwiwināw^a he is short-horned, from tcāgi-wināwā.

tcā'kwāpyāw^t it is short, from tcāgi-āpyāwī.

sāsī'gā'kyāw^a *he scattered it*, which is just the same in meaning as sāsīgā'kāw^a.

Intervocalic Consonants

The most common accretion is *t*.¹ It falls in between two vowels, each of which is part of a different member in a word-group. Examples :

Between <i>i</i> and <i>e</i> :	á'kwitepyāg ⁱ	<i>top of the water.</i>
<i>e</i> and <i>a</i> :	netá ^a panān ⁱ	<i>I laugh.</i>
<i>a</i> and <i>o</i> :	ā'wātōw ^a	<i>he carries it away.</i>
<i>o</i> and <i>ā</i> :	pī'tōtāw ^a	<i>he crawls in.</i>
<i>ā</i> and <i>u</i> :	pyā'tusāw ^a	<i>he came walking.</i>

When the vowel of the second member is *i*, then *t* usually becomes *tc* :

Between <i>i</i> and <i>i</i> :	pī'tcisāw ^a	<i>it (bird) flew in.</i>
<i>a</i> and <i>i</i> :	kepātcigān ⁱ	<i>cork, stopper.</i>
<i>ā</i> and <i>i</i> :	kugwā'tcisāw ^a	<i>it (bird) tries to fly.</i>
<i>ā</i> and <i>i</i> :	kīwā'tciāhāw ^a	<i>he is lonely.</i>

Sometimes *n* has the value of an intervocalic consonant. It often occurs immediately after the temporal article *ā* :

ānā'batāgⁱ *when he saw it*, the independent form of which is wā'batāmw^a *he sees it.*

tcāgānā'towātcigⁱ *people of all languages*, a participle with the elements of tcā'gⁱ, *all*, *ā* having the force of the relative pronoun *who*, and ā'towāwāgⁱ *they speak a language.*

Sometimes *n* occurs between vowels much after the fashion of *t* :

Between <i>ā</i> and <i>e</i> :	myā'negāw ^a	<i>he dances poorly.</i>
<i>ā</i> and <i>e</i> :	upyā'nesiw ^a	<i>he is slow.</i>

It looks as if *s* plays the same rôle as *t*, *tc*, and *n*, but on a smaller scale. Instances of its use are :

Between <i>e</i> and <i>i</i> :	asā'wesiw ^a	<i>he is yellow.</i>
<i>i</i> and <i>ā</i> :	pyā'tcisāw ^a	<i>he came in flight.</i>
<i>a</i> and <i>o</i> :	nēmasōw ^a	<i>he is standing up.</i>
<i>u</i> and <i>ā</i> :	pyā'tusāw ^a	<i>he came walking.</i>

¹ *t* serves as a connective in an inanimate relation and will be mentioned again.

In these examples *s* has an intimate relation with the notion of animate being. It will be referred to later.

The consonant *m* is sometimes an intervocalic element :

nānāhícmāw ^a	<i>he carefully lays him away.</i>
pānenāmw ^a	<i>he dropped it.</i>

Other functions of *m* will be mentioned farther on.

Some consonants interchange one with another. The process is marked among those with forward articulation. *S* and *c* interchange in :

mése'kwāw ^a	<i>she has long hair.</i>
mécāw ⁱ	<i>it is large.</i>
Māsésībōw ⁱ	<i>large river, name for the Mississippi.</i>
mécimin ^a	<i>large fruit, word for apple.</i>

'*t* and *c* interchange :

mé'tahwāw ^a	<i>he shot and hit him.</i>
mécwāw ^a	<i>he shot and hit him.</i>

'*t* and *s* interchange :

né'tamawāw ^a	<i>he killed him for another.</i>
néśāw ^a	<i>he killed him.</i>

Assimilation between Independent Groups

Assimilation is a frequent factor in sound change. Instances will first be shown in the case of compounds where the process works between independent words. The final vowel of a word coalesces with the initial vowel of the next, with results like the following :

<i>a</i> becomes <i>ā</i> :	nī'nācīt ^a	<i>I in turn, for nī'na ā'cīt^a.</i>
<i>a</i> becomes <i>ā</i> :	nā'kā'pyātc ⁱ	<i>again he came, for nā'k^a ā'pyātcⁱ.</i>
<i>i</i> becomes <i>a</i> :	pyā'wagayō ⁱ	<i>they came to this place, for pyā'wagⁱ ayōⁱ.</i>
	nā'gawā'kiw ⁱ	<i>it is a sandy place, for nā'gawⁱ ā'kiwⁱ.</i>
<i>i</i> becomes <i>ā</i> :	itépāhāt ⁱ	<i>he goes there, for itépⁱ ā'hātⁱ.</i>
	nepā'nātēg ⁱ	<i>they go to fetch water, for nepⁱ ā'nātēgⁱ.</i>
<i>i</i> becomes <i>i</i> :	kāciw ^a ?	<i>what does he say? for kācⁱ iw^a?</i>
	īnīpīyōw ^o	<i>so it was told of yore, for ī'nīpⁱ iyōw^o.</i>
<i>i</i> becomes <i>a</i> :	nā'wāskūt ^o	<i>in the center of the fire, for nā'wⁱ ā'skut^o.</i>
	āgwāmātcin ⁱ	<i>he did not eat it, for ā'gwⁱ āmwātcinⁱ.</i>

i becomes *ā* : äë'gāpè° and often, for äë'g¹ āpè°.

wātcā'gwi nenān the reason why I did not tell thee, for
wā'tc¹ āgwinenān¹.

i becomes *u* : negutū'kātèg¹ on one of his feet, for négut¹ ū'kātèg¹.

tcī'gepyāgūt¹ away from the edge of the water, for
tcīgepyāg¹ ūtc¹.

The two vowels in contact may assimilate into a diphthong :

a and *a* becomes *ai* : néci'kaiyō¹ alone here, for néci'k^a āyō¹.

The result of the assimilation of two vowels may produce a sound different from either :

e and *a* become *ā* : pyā'nutawitāy^u if he should come to me
here, for pyā'nutawit^e āyō¹.

i and *a* become *ā* : mātaçikicāy^u he might overtake me here,
for mātaçikicⁱ āyō¹.

Assimilation between Dependent Groups

Assimilation between contiguous words is usually in the nature of the first sound suffering loss either by absorption or substitution. In much the same way does assimilation act between members that make up a word-group. But in an attempt to illustrate the process there is an element of uncertainty which lies in the difficulty to account for the absolute form of each component, for many members of a composition seldom have an independent use outside of the group. They occur in the composition only, and in such way as to adjust themselves for easy euphony ; and in doing so often conceal either an initial or a final part. Nevertheless, hypothetical equivalents are offered as attempts at showing what the pure original forms probably were. Hyphens between the parts mark the places where probable changes take their rise :

i and *e* become *e* : pémegāw^a he dances past, from pemi-egāw^a.

i and *ā* become *ā* : mānetōwāgèn¹ sacred garment, from mānetōwi-āgèn¹.
cō'skwāgèn¹ smooth cloth, from cōskwi-āgèn¹.

i and *a* become *a* : pemāhogōw^a he swims past, from pemi-ahogōw^a.
tāgwahōtōw^a he is trapping, from tagwi-ahōtōw^a.

i and *ā* become *ā* : māçiskiwāpōw¹ tea i. e. herb fluid, from māçiskiwī-āpōw¹.

wickúpāpōw¹ wine i. e. sweet fluid, from wickupi-āpōw¹.

- i* and *ā* become *ā* : *ānemāskāw*¹ *it fell the other way*, from *ānemī-āskāw*¹.
i and *ō* become *ō* : *pēmōtām^w* *she passes by with a burden on her back*, from *pemī-ōtām^w*.
i and *u* become *u* : *pēmūsāw^a* *he walks past*, from *pemī-usāw^a*.
i and *ū* become *ū* : *pēmūtāw^a* *he crawls past*, from *pemī-ūtāw^a*.

Assimilation occurs between sounds not contiguous :

kīcwinī'cwiḥāw^a *after he had two*, for *kīcinī'cwiḥāw^a*.

A vowel drops out and a vocalic consonant as a glide takes its place, the change giving rise to a cluster made up of a consonant and a semivowel :

- i* drops out : *āwāpwāgesitcⁱ* *then she began to wail*, from *āwāpi-wāgesitcⁱ*.
ā'kyāwātⁱ *and he grew jealous*, from *ā'kī-yāwātⁱ*.
o drops out : *āwā'wiswātⁱ* *he singed his hair*, for *āwā'wiso-wātⁱ*.
u drops out : *ā'siswātⁱ* *she fried them*, from *āsisu-wātⁱ*.

Dissimilation

Vowels often undergo dissimilation. A very common change is *o* or *u* to *wā*. The process takes place in the formation of participles from words having *o* or *u* as initial vowels :

- ūtciw^a* *he came thence*; *wā'tciṭ^a* *he who came thence*.
ūtō'kimⁱ *his land*; *wā'tō'kimīt^a* *he who owns land*.
ūgwisānⁱ *his or her son*; *wā'gwisit^a* *one who has a son*.
ū'kātcⁱ *his foot*; *wā'kātcⁱ* *one that has feet*, name for a bake oven.
ūwīwīnⁱ *his horn*; *wā'wīwīnāⁱ* *one with small horn*.

The vowel *u* becomes *wā* when preceded by a consonant :

- kūsīgāw^a* *she plays at dice*; *kwā'sigāt^a* *she who plays at dice*.
nūwīw^a *he goes outside*; *nwā'wīwāpē^a* *he always goes outside*.

The vowel *u* can also become *wā* :

- uwī'gewāwⁱ* *their dwelling place*; *wāwī'gewāgⁱ* *at their dwelling place*.

Elision plays an important part in sound change. It occurs at final and initial places and at points inside a word-group. The places where the process happens and the influences bringing it about are shown in the examples to follow.

Words sometimes suffer loss of initial vowel :

- skotāgⁱ* *in the fire*, for *āskotāgⁱ*.

töckótämwägⁱ *at their fire*, for utöckótämwägⁱ.
 kwīgägōⁱ *nothing*, for āgwīgägōⁱ.
 nā'gwātⁱ *then he started away*, for ā'nāgwātⁱ.

The loss often includes both initial consonant and vowel :

cwā'cig^a *eight*, for a nécwācig^a.
 a'kānigicēgwⁱ *all day long*, for nē'kānigicēgwⁱ.

The second member of a consonant cluster frequently drops out :

ā'pā'wināwātⁱ *when he did not see him*, for ā'pā'wināwātⁱ.
 pémutām^a *he shot at it*, for pémwutām^a.

The elision of *n* takes place before some formative elements :

ā'pāgicigⁱ *when it (a bird) lit*, a subordinate form of pāgic-
 cinw^a *it (a bird) lit*.
 nānā'hicimāw^a *he laid him away carefully*, while nānā'hicinw^a is
he fixed a place to lie down.

To slur over a syllable frequently brings about the loss of the syllable. In the instance below, the stressed, preserved syllable moves into the place made vacant and becomes like the vowel that dropped out :

ācⁱ *take her along*, for āwācⁱ.
 ā'wāpatāhogūtⁱ *then he started off carrying her on his back*, for
 ā'wāpawātāhogūtⁱ.

The second part of a stem often suffers loss from the effect of having been slurred over :

kīwāiyatcītⁱ *after he had gone*, for kīcīwāiyatcītⁱ.
 kī'kē'kā'nemātⁱ *after he had learned who he was*, for kī'cīkē'kā'ne-
 mātⁱ.
 ā'pāwā'nāwātⁱ *when he did not see him*, for ā'pāwā'wināwātⁱ.
 ā'pāwā'camātⁱ *when he did not feed him*, for ā'pāwā'wicāmātⁱ.

To slur over part of a pronominal ending causes loss of sound there :

uwī'nemōⁱ *his sisters-in-law*, for uwīnemōhāⁱ.

Removal of the grave accent one place forward causes elision of final vowel :

ne'kānitēpē'kⁱ *all night long*, for ne'kānitēpē'kiwⁱ.

pénāmùw^a he imitated the turkey call, from penāwa-mūwa.
ma'hwāmùw^a he imitated the cry of the wolf, from ma'hwāwa-
mūwa.
kīutū'gimā'mipèn^a thou wilt be our chief, in which is the noun
ugimāw^a chief.

n̄atunä'hwätüg^o he may have sought for him, the primary mood
 of which is n̄atunähwāw^a he seeks for him.
pyä'gwänⁱ he must have come, the primary mood of which
 is pyä'w^a he came.

ō'san¹ *his father*; ō'seg¹ *at his father's (lodge).*
 ú'kātàn¹ *his foot*; ú'kātèg¹ *at or on his foot.*

úwānāgw ^h <i>hole</i> ;	uwā'nagōg ^h <i>at the hole.</i>
mā'kā'kw ^h <i>box</i> ;	mā'kā'kūg ^h <i>at or in the box.</i>
mé'tegw ^h <i>tree</i> ;	mé'tegūg ^h <i>at the tree.</i>
kī'cesw ^a <i>sun</i> ;	kī'cesōg ^h <i>at the sun, suns.</i>
nénusw ^a <i>buffalo</i> ;	nénusōg ^h <i>buffaloes.</i>

úpiskwa⁶ *bladder*; úpiskwâg¹ *on or at the bladder*.
utâwawga¹ *ear*; utâwagâg¹ *at or in the ear*.

úwānàgwⁱ *hole*; uwā'nagònⁱ *holes*.

má'ka'kw ⁱ <i>box</i> ;	má'ka'kòn ⁱ <i>boxes</i> .
mé'tegw ⁱ <i>tree</i> ;	mé'tegòn ⁱ <i>trees</i> .

A k-sound stands before the terminal *wa* of some animate nouns. To shift an *ō* into the place of the *w* is a device for creating a diminutive :

má'kw ^a <i>bear</i> ;	má'kō ^a <i>cub</i> .
ácaskw ^a <i>muskrat</i> ;	ácaskō ^a <i>a little muskrat</i> .
cégāgw ^a <i>skunk</i> ;	cégāgō ^a should be the proper diminutive, but it happens to be the word for onion, while kitten skunk is cegā'-gōhā ^a , a sort of double diminutive.

The substitution of *o* or *u* for *w* occurs with great frequency :

pā'gwāw ⁱ <i>it is shallow</i> ;	pā'gōnēg ⁱ <i>the place of shallow water, the name for St Louis</i> .
nīcwi'kwāwāg ⁱ <i>two women</i> ;	nīcō'kwāwāw ^a <i>he has two wives</i> .
méckw ⁱ <i>blood</i> ;	méckusiw ^a <i>he is red</i> .
wī'pegwāw ⁱ <i>it is blue</i> ;	wīpégusiw ^a <i>he is blue</i> .

COMPOSITION

Most that has gone before has been taken up chiefly with the question of sounds. The object has been to show what sounds the language used, how they were formed, and to indicate some of the forces that governed sound change. The purpose next is to examine the units which the sounds render intelligible and point out something of the way they arrange themselves in the formation of words. It would perhaps be more correct to use the term *sentence* instead of *word*, because the combined effect of all the elements in a combination is really that of a sentence or an approach to something more like a sentence. Nevertheless, word, word-group, word-formation, and similar terms will often be used, and their contents will always indicate how far they are sentences and how much they lack of being sentences.

The method of forming word-groups is by composition. In the formation of a group component members follow an orderly sequence ; the position of each member is determined by the kind of idea it signifies. Every member is expressive of an abstract idea ; the idea may be some activity of space, or condition. These com-

ponent elements fall into two general categories — formatives and stems.

Formatives

Formatives make up two classes, pronominal and morphologic. Some formatives are prefixes, but most are suffixes. Some pronominal formatives indicate gender — the terminal *-a* for an object possessing the combined qualities of life and motion, and the terminal *-i* for an object without those attributes. — Thus :

pyä'wa <i>he comes ;</i>	pyä'migätwi <i>it comes.</i>
ineniwa <i>man, he is a man ;</i>	ineniwi <i>bravery, it has the quality of man-</i>
ānemō'a <i>dog ;</i>	ā'ki <i>earth.</i> [hood.

The distinction runs through the whole language and every verb and noun must fall in one or the other class. Forms ending in *-a* are termed animate and those ending in *-i* inanimate. The distinction between the two opposing groups is not rigidly maintained, for often an object regularly inanimate is personified as having life and so takes on an animate form. But permanent forms of lifeless objects having an animate ending cannot always be explained by personification. The breaking down of the contrast is best seen in the names of plants ; logically they fall into the inanimate class, but many are used as animate forms, like ādāmin^a *corn*, āsāmāw^a *tobacco*, mecīmin^a *apple*.

Formatives of the morphologic class have a different function. They are sometimes prefixed, but more usually are suffixed. Among the notions they convey in the verb are those of mood and manner, as *-tug°* in pyä'tug°, *he probably came*, which conveys the notion of doubt or uncertainty ; while *-āpe°* in pyä'wāpè°, *he is in the habit of coming*, expresses the frequency or repetition of an act. Formatives are also instrumental not merely in the formation of nouns but in giving to the nouns they form the quality of distinctive designation. Thus *-mina* in ādā-min^a *corn* denotes *fruit, grain, berry* ; and *-gani* in pā'skesigānⁱ *gun*, literally *exploder*, is expressive of *tool, implement, instrument*.

Stems

Initial Stems, Secondary Stems, and Secondary Stems of the First and Second Orders.

Stems may be divided into initial and secondary members. Initial stems always precede the secondary and are capable at times of standing alone with the office of adverbs. Some instances are, *útcⁱ whence*, *ícⁱ hence*, *tagwⁱ together*. Furthermore, an initial stem can enter into composition with only a formative and express an independent statement, though not always with exact sense: *útcíw^a* means that *one has come from some place*.

Two or more initial stems follow in a definite order: *wä'pusäw^a* *he begins to walk*; *wäpi-* is the initial stem meaning 'to begin' and *-usä-* is a secondary stem expressing 'walk.' *wä'pipyä'tusäw^a* *he begins to approach on the walk*; *pyä-* between *wäpi-* and *-usä-* is another initial stem meaning 'movement hither.' *wä'pipyätcitetép-usäw^a* *he begins to approach walking in a circle*; *tetép-* is a new initial stem conveying the notion of movement in a circle.

The consecutive order of initial stems with reference to a secondary stem depends much on the sort of notions they convey. An initial stem takes its place next to a secondary stem because the notion it implies is of such a nature as to combine easily with the notion of a secondary stem to form an added sense of something more definite and restricted. It is as if both initial and secondary stems were modifiers of each other. An initial stem coming before another initial stem in combination with a secondary stem stands toward the group in much the same relation as if the group were a simple secondary stem. The place of an initial stem is at the point where the idea it expresses falls in most appropriately with the mental process of restricting and making more definite the sense of the whole group.

A secondary stem, on the other hand, never occurs alone but is found usually between an initial member and a formative, or else, but much less often, in conjunction with only a formative. In a combination like *tä'wicinw^a* *he fell and hurt himself*, *täwi-* is initial and denotes *pain*, while *-cin* is secondary and expresses the notion of coming to a state of rest. In the word *tci'mänⁱ* *canoe* is a less frequent example of a secondary stem occupying first place. The stem *tci* or *tcin* comes from a secondary element indicating move-

ment in water, and the rest of the word is a suffix denoting abstraction, both together referring to the object used for going through water.

Just as a regular system of arrangement determines the position of initial stems before secondary stems, so the same sort of order places the representatives of one group of secondary stems before those of another group. This peculiar method of arrangement rests largely on the nature of the ideas expressed by the stems. It makes possible a further division of stems into secondary stems of the first order and secondary stems of the second order.

Secondary stems of the second class always stand nearest to the terminal pronominal signs: *-usä-* in *wä'pusäw^a* *he begins to walk* is a secondary stem of the second class. Some secondary stems of the first class, however, can occupy the same place, but only when a secondary stem of the second class is absent: *tcägānāgetünw^a* *he has a small mouth* contains two secondary stems of the first class; one is *-nag-* which expresses the notion of cavity, the other is *-tun-* which refers to the idea of space round about a cavity and is a term applied to the lips and mouth. A further division of secondary stems of the first class might be suggested in which *-nag-* would represent one class and *-tun-* the other: *-nag-* belongs to a more stationary type which always stands next to initial stems when there are other secondary stems in composition, and *-tun-* belongs to a more mobile kind. The latter type is frequent in nominal form: *ütönⁱ* *mouth*, literally *his mouth*. In *kiwéskwäpyäw^a* *he is drunk* is illustrated two types of secondary stems: *kīwe-* is an initial stem meaning indefinite movement anywhere; *-skwä-* is a secondary stem of the first class denoting the neck and back of the head; and *-pyä-* is a secondary stem of the second class expressive of a subtle, attributive condition. A fuller and more correct rendering of the combination would be something like *he is in a state of aimless movement in the region about the neck and head*.

The foregoing is a brief survey of the method of word combination, yet perhaps ample enough to give a fairly definite impression of the nature of the process. The next will be a short detailed account of the various types of stems that are fused together in the expression of thought. In order to give a nearer insight into the

system of composition it seems necessary to go into some description of the stems themselves. Not all the component parts of an expression will be taken up at the same time, but only such as are for the moment under discussion. For instance, first in the order will come initial stems, then secondary stems of the first class, and then secondary stems of the second class. Each stem will be given with a definition indicating briefly and as nearly as possible the exact nature and scope of its meaning; but the combination that includes the stem will be given a free idiomatic rendering which will go for a translation of the whole as it stands in coördination.

Examples of Initial Stems

The examples to follow first treat of initial stems; the number of them is large and the ideas they express are of great variety.

kī- indicates the general notion of indefinite movement round about, here and there :

<i>kī'wisāw^a</i>	<i>it, (a bird), flies round about.</i>
<i>kī'witcimāw^a</i>	<i>he swims round about.</i>
<i>kī'weskāw^a</i>	<i>he goes a-journeying somewhere.</i>
<i>kī'wāmōw^a</i>	<i>he sought safety here and there. [another.</i>
<i>kīwā'bamāw^a</i>	<i>he went about looking at one and then</i>

pem(i)- expresses the notion of movement by, past, alongside :

<i>pémē'kāw^a</i>	<i>he passes by.</i>
<i>pémegāw^a</i>	<i>he dances by.</i>
<i>pémināgāw^a</i>	<i>he passes by a-singing.</i>
<i>pémipahōw^a</i>	<i>he passes by on the run.</i>
<i>pémūtāw^a</i>	<i>he crawls past.</i>

pem(i)- comes to have the force of an inchoative :

<i>pémusāw^a</i>	<i>he started off on a walk.</i>
<i>pémwāgesi^w</i>	<i>she began to wail.</i>

pyä- signifies movement hitherward :

<i>pyä'w^a</i>	<i>he comes.</i>
<i>pyä'taci^w</i>	<i>he fetches home game.</i>
<i>pyäté'kwāwāw^a</i>	<i>he brings home a wife.</i>
<i>pyä'tāskāw^l</i>	<i>it falls this way.</i>
<i>pyä'tciné'kawāw^a</i>	<i>he comes driving them home.</i>
<i>pyä'twāwā'migāt^w</i>	<i>it comes a-roaring.</i>

pī(t)- conveys the sense of movement into an enclosure :

<i>pī'tāsēnwⁱ</i>	<i>it blows inside.</i>
<i>pī'tciwenāw^a</i>	<i>he leads him within.</i>
<i>pī'ta'hwāw^a</i>	<i>he buries him.</i>
<i>pī'tigāw^a</i>	<i>he enters.</i>

cōsk- is used in several ways. In a special sense it denotes horizontality, straightness :

<i>cō'skā'kusāw^a</i>	<i>he walks erect.</i>
<i>cōskā'pyācinw^a</i>	<i>he lies at full length.</i>
<i>cō'skāpyāwⁱ</i>	<i>it is*straight.</i>

In another sense, closely related to straightness, is one meaning smoothness, lack of friction, ease of movement :

<i>cō'skwāwⁱ</i>	<i>it is smooth, slippery.</i>
<i>cō'skwicinw^a</i>	<i>he slips and falls.</i>
<i>cō'skonāw^a</i>	<i>he slips hold of him.</i>

sāg(i)- implies the notion of exposure, manifestation, visibility :

<i>sā'gisēnwⁱ</i>	<i>it sticks out.</i>
<i>sā'gitepācinw^a</i>	<i>he lies covered all over except at the head.</i>
<i>sā'giwinā'gāpāw^a</i>	<i>but for the tips of his horns he stands shut off from view.</i>
<i>sā'gitepā'hogōw^a</i>	<i>he floats with the head only out of the water.</i>
<i>sā'gikumāw^a</i>	<i>he exposes his nose to view.</i>

sag(i)- has a transitive force with the meaning of seizing hold :

<i>sagecānāw^a</i>	<i>he holds him by the ear.</i>
<i>saginē'kānāw^a</i>	<i>he leads him by the hand.</i>
<i>sagī'pāw^a</i>	<i>he bites hold of him.</i>
<i>sagānē'kwānāw^a</i>	<i>he grabs hold of him by the hair.</i>

mīk- conveys the sense of occupation, employment in the performance of some activity :

<i>mī'kétcāwīw^a</i>	<i>he works, is busy.</i>
<i>mī'ketām^w</i>	<i>he is occupied with a piece of work.</i>
<i>mī'kemē'kwāwāw^a</i>	<i>he goes a-wooing.</i>
<i>mī'kétcihāw^a</i>	<i>he is engaged in an attempt to heal him.</i>
<i>mī'kwā'nemāw^a</i>	<i>she dotes upon it — her child.</i>

kōg- refers to an activity with a fluid, most often with water, in which instance is derived the idea of washing :

<i>kōgēnigāw^a</i>	<i>she is at work washing clothes.</i>
<i>kōg'inetcāw^a</i>	<i>he washes his own hands.</i>
<i>kōgenāw^a</i>	<i>he washes him.</i>
<i>kōg'igēnānōw^a</i>	<i>he washes his own forehead.</i>
<i>kō'g'iw^a</i>	<i>he mires (in the mud).</i>

kās(i)- denotes the idea of obliteration, erasure, wiping :

<i>kā'sihām^w</i>	<i>he erases it.</i>
<i>kāsi'gwāhōw^a</i>	<i>he wipes his own face.</i>
<i>kāsi'gācinw^a</i>	<i>he wipes his own foot.</i>

pās(i)- implies the notion of swift, lively contact :

<i>pāsiti'yāhwāw^a</i>	<i>she spans him.</i>
<i>pāsī'gwāhwāw^a</i>	<i>he slaps him in the face.</i>
<i>pāsīgūmāhwāw^a</i>	<i>he barely grazes his nose.</i>
<i>pāsinyāsōw^a</i>	<i>it (an animate subject) fries.</i>
<i>pāsetāwⁱ</i>	<i>it is hot.</i>

wī- expresses the sense of accompaniment, association, companionship :

<i>wī'dāmāw^a</i>	<i>he accompanies him.</i>
<i>wī'tcāwāw^a</i>	<i>he goes along, too.</i>
<i>wī'pāmāw^a</i>	<i>he sleeps with him.</i>
<i>wī'pumāw^a</i>	<i>he eats with him.</i>
<i>wī'kumāw^a</i>	<i>he invites him to the feast.</i>

tū(wi)- has to do with the sensation of physical pain :

<i>tū'witépācinw^a</i>	<i>he fell and hurt his head.</i>
<i>tū'witanásitāgāpāw^a</i>	<i>it hurts his feet to stand.</i>
<i>tū'wekwāw^a</i>	<i>his head aches.</i>

nāg(i)- denotes the change from an activity to a rest and is best translated by words like halt, stop, pause :

<i>nāg'iw^a</i>	<i>he stops moving.</i>
<i>nāg'icnw^a</i>	<i>he halts on the journey.</i>
<i>nāgipahōw^a</i>	<i>he stops running.</i>

pōn(i)- also expresses the notion of cessation, but with more of the idea of the negative temporal element *no more, no longer* :

<i>pō'negāw^a</i>	<i>he is no longer dancing.</i>
<i>pōnénāgāw^a</i>	<i>he has ceased singing.</i>
<i>pōnésenyāw^a</i>	<i>he has done eating.</i>
<i>pō'nepyāw^a</i>	<i>he is no longer a drunkard.</i>
<i>pō'nimāw^a</i>	<i>he has stopped talking to him.</i>

wāp(i)- signifies the idea of commencement, inception, inchoation :

<i>wāpīnāhusāw^a</i>	<i>he is beginning to know how to walk.</i>
<i>wāpīkémīyāw^a</i>	<i>the rain is beginning to fall.</i>
<i>wā'pīwī'senīw^a</i>	<i>he is starting to eat.</i>

kāsk(i)- implies potency, ability, efficiency, and gets the meaning of success, triumph, mastery :

<i>kāskīhāw^a</i>	<i>he succeeds in buying him.</i>
<i>kāskīmenōw^a</i>	<i>he is able to drink.</i>
<i>kāskīnī'mānām^a</i>	<i>he can lift it.</i>
<i>kāskīmāw^a</i>	<i>he succeeds in persuading him.</i>
<i>kāskīnāwāw^a</i>	<i>he can see him.</i>

kī'c(i)- expresses the completion, the fulfilment of an act :

<i>kī'cāwīw^a</i>	<i>he has finished (a task, an undertaking).</i>
<i>kī'cetāwⁱ</i>	<i>it is done cooking.</i>
<i>kī'cī'tōw^a</i>	<i>he has finished making it.</i>
<i>kī'cipyāw^a</i>	<i>he has already arrived.</i>
<i>kī'cīnepōhīw^a</i>	<i>he has since died.</i>

The initial stems that have just been shown represent but a few out of a vast number. The account will pass on to a description of secondary stems, treating first the class that usually come after initial stems. Though secondary stems are not so numerous as initial stems, they nevertheless can fill an extended list.

Examples of Secondary Stems of the First Order

-ā'kw- relates in a general way to matter at rest and in the form of linear dimension together with an uncertain implication as to its state of hardness. The term is of frequent use, an example of which comes out in the notion of wood, tree, forest :

<i>pē'kwā'kwāwīwⁱ</i>	<i>it is a place of clumps of trees.</i>
<i>pīgāwā'kwāwīwⁱ</i>	<i>a grove stands dense in the distance.</i>

pāgā'kwicinw ^a	<i>he bumped against a tree, post, bar.</i>
pécigwā'kwātw ¹	<i>the log, tree, stick is straight.</i>

-nag- expresses the idea of an opening, as of a hole :

pā'kānāgetāw ¹	<i>the hole gapes open.</i>
māgānāgetūnw ^a	<i>he has a large mouth.</i>
kūgwānāgucāw ^a	<i>he has holes pierced in his ears. *</i>

-tag- is another characteristic term of uncertain definition. It refers to the idea of color without having reference to light, shade, hue, or any quality attributive of color. It is simply the idea in the abstract :

ketāgesiw ^a	<i>its color is spotted.</i>
wābā'tāgawāw ^a	<i>its color is white.</i>
meckwā'tāgawāw ^a	<i>its color is red.</i>

-nāgu- stands for the idea of look, appearance, resemblance :

pé'kīnā'gusiw ^a	<i>he looks like a foreigner.</i>
ā'kwā'wināgusiw ^a	<i>he has an angry look.</i>
kecā'tcinā'gusiw ^a	<i>he has a gentle appearance.</i>
kīwā'tcinā'gusiw ^a	<i>he seems sad, lonely.</i>

-itā- refers to subjective feeling and so finds place for manifold application :

icitāhāw ^a	<i>thus he feels (i. e. thinks).</i>
myācitāhāw ^a	<i>she is tearful, sad to weeping.</i>
mā'necitāhāw ^a	<i>he is ashamed.</i>
upitāhāw ^a	<i>he is joyful.</i>
kīwātcitāhāw ^a	<i>he is lonely.</i>

-āne- relates to mental operation :

ke'kā'nemāw ^a	<i>he knows, understands him.</i>
muswā'nemāw ^a	<i>he suspects him.</i>
menwā'nemāw ^a	<i>he feels well disposed toward him.</i>
nā'gatawā'nemāw ^a	<i>he keeps him constantly in mind.</i>
panā'nemāw ^a	<i>he makes fun of him.</i>

-kam- expresses the idea of indefinite space as applied to such terms as sweep, range, latitude, expanse :

ke'tcīkamīw ¹	<i>it is the sea ; it is the great expanse.</i>
ta'kamisāw ^a	<i>it flies over an expanse.</i>

tá'kamîw ^a	-- he crosses an open space.
ká'kamîw ^a	he makes a short cut across.

In the list of examples that follow immediately are stems relating to parts of the body. Their inherent sense is concerned with space, each form having to do with situation in a given relation.

-cā- carries the vague notion of something thin, as of a sheet, film, blade. It is an association with this spatial sense that makes it a term applied to the ear :

mamā'gecāw ^a	he has big ears.
kī'skecāw ^a	he has no ears, literally he is cut ear.
kagā'nocāw ^a	he has long ears.

-kum- or -gum- conveys the intrinsic meaning of linear protrusion, projection out from a base. The use of the term for *nose* is a natural application :

wāgi'kumāw ^a	he has a crooked nose.
pāgikūmācinw ^a	he bumped his nose.
tatōgikūmāw ^a	his nose spreads at the nostrils.
kīnīgūmāyāw ⁱ	it is sharp at the point.

-tun- is used for the external space about the mouth :

mī'setūnw ^a	he has a mustache.
kepāgetūnw ^a	he has thick lips.
pā'ketūnw ^a	he opens his mouth.

-winā- gives the notion of linear dimension round of form and of limited circumference. It is a term for *horn* :

tca'kwī'wināw ^a	he is short-horned.
pō'kwīwinācinw ^a	he fell and broke his horn.
pa'kwīwināw ^a	he is shedding his horns.

-kwā- is a spatial element expressive of the place back of the neck, of the hair on the head and even of the head itself. The term has also a feminine meaning, taken, it seems, from the notion of hair. The four different expressions, neck, hair, head, and woman-kind are thus shown in the order named :

nāpé'kwāhwāw ^a	he lassoes him by the neck.
ke'kite'kwānāw ^a	he hugs her round the neck.
penāhā'kwāw ^a	she combs her hair.

mése'kwāw ^a	<i>she has long hair.</i>
tā'we'kwāw ^a	<i>he has a headache.</i>
matagú'kwāhōw ^a	<i>he covers his (own) head.</i>
pyāte'kwāwāw ^a	<i>he brings home a wife.</i>
mī'kemé'kwāwāw ^a	<i>he is wooing.</i>
nīcō'kwāwāw ^a	<i>he has two wives.</i>

-*tcā*- signifies a material body with volume more or less plump and distended. It is used with reference to the abdominal region :

upiskwātcāw ^a	<i>he is big round the waist.</i>
pāgétcācinw ^a	<i>he ran and fell on the flat of his belly.</i>
ké'kitétcānāw ^a	<i>he grabs him round the body.</i>
mī'setcāw ^a	<i>he is afflicted with the dropsy.</i>

Examples of Secondary Stems of the Second Order

The secondary stems up to this point have been of the first class. The ones to follow will be of the second class. It is not certain which is the more numerous ; and it is not always easy to determine the place of some secondary stems, whether they belong to the first or to the second class. In passing along the list one should note that in some respects there is a general similarity in the groups of ideas expressed by secondary stems of the second class and by initial stems. There are, however, differences in the apparent similarities, the differences being chiefly of manner and degree. The illustrations will bring out these points :

-*egā*- is for the movement of one in the dance :

upyā'negāw ^a	<i>he moves slowly in the dance.</i>
nīgā'negāw ^a	<i>he leads in the dance.</i>
ā'hā'wegāw ^a	<i>he dances the swan-dance.</i>
cā'wānō'wegāw ^a	<i>he dances the Shawnee dance.</i>

-*tcim*- is locomotion through water. It is equivalent in meaning to the word *swim* :

kiwītcimāw ^a	<i>he swims round about.</i>
pemitcimāw ^a	<i>he swims past.</i>
nahītcimāw ^a	<i>he knows how to swim.</i>
nō'tāwītcimāw ^a	<i>he gives out before swimming to the end of his goal.</i>

-*isä*- conveys primarily the notion of velocity, speed, and is associated with locomotion through the air :

haníwisâw ^a	<i>he runs swiftly.</i>
myâcisâw ⁱ	<i>it lacks a keen edge.</i>
nemâswisâw ^a	<i>he lit feet first.</i>
kugwâ'tcisâw ^a	<i>he tries to fly.</i>
pî'tcisâw ⁱ	<i>it blew inside.</i>
tcapô'gisâw ^a	<i>he fell into the water.</i>

-*isahô*- is swift locomotion through the air and of a kind that is limited as to space and duration. The idea of the motion is defined by such terms as *jump, leap, bound* :

pîtcisahôw ^a	<i>he leaps into an enclosure.</i>
pyâtcisahôw ^a	<i>he comes a-jumping.</i>
kwâskwisahôw ^a	<i>he dismounts.</i>
nûwisahôw ^a	<i>he goes out on the jump.</i>

-*ôtâ*- is for locomotion along a surface and attended with effort and retardation. It is tantamount to the notion expressed by the word *crawl* :

anémôtâw ^a	<i>he crawls moving yon way.</i>
tá'kamôtâw ^a	<i>he crawls athwart.</i>
ágôsîôtâw ^a	<i>he crawls upward (as up a tree).</i>
kétâsîôtâw ^a	<i>he crawls upward (as up a hill).</i>
pî'tôtâw ^a	<i>he crawls inside.</i>

-*usâ*- has to do with locomotion by land, with particular reference to that of the foot and leg, and of such nature as to imply lack of speed. The combination of ideas involved is synonymous with the word *walk* :

cōskâ'kusâw ^a	<i>he walks straight, erect.</i>
wâ'pusâw ^a	<i>he starts off on a walk.</i>
nâhusâw ^a	<i>he learns how to walk.</i>
tetêpusâw ^a	<i>he walks round in a circle.</i>
pyâ'tusâwa ^a	<i>he comes a-walking.</i>

-*gāpā*- is for perpendicularity, and its use is observed in situations of rest with upright support. The term is rendered by the word *stand* :

nénigwígāpāw ^a	<i>he stands trembling.</i>
némaswígāpāw ^a	<i>he rose to his feet.</i>
nagígāpāw ^a	<i>he came to a standstill.</i>
pónígāpāw ^a	<i>he ceased standing.</i>

-pahō- is of the nature of *usā*, differing from it only in the degree of locomotion. It denotes speed and swiftness, and is best translated by the term *run*:

pémipahōw ^a	<i>he runs past.</i>
nágipahōw ^a	<i>he stops running.</i>
kī'wipahōw ^a	<i>he runs around.</i>
nágaskipahōw ^a	<i>he runs with back bent forward.</i>
pā'cipahōw ^a	<i>he leaves a gentle touch as he flies past on the run.</i>

-ō- implies conveyance, portage, transportation. It has acquired the specific meaning of carrying a burden on the back:

kī'yōmāw ^a	<i>she carries it (her child) about on her back.</i>
pémōtām ^w	<i>he passes by with a burden on his back.</i>

-hogō- is locomotion by water and differs from *-tcim-* in having more of the sense of conveyance:

pyātāhogōw ^a	<i>he comes a-swimming.</i>
kiwāhogōw ^a	<i>he swims about.</i>
ānemāhogōw ^a	<i>he swims thitherward.</i>
sā'gitepā'hogōw ^a	<i>he swims with the head above water.</i>

-pugō- is another term for locomotion by water. It expresses passive conveyance, the sense of which comes out well in the word *float*:

pémitetepipūgōtāw ⁱ	<i>it floats past a-whirling.</i>
nū'wipugōw ^a	<i>he came out a-floating.</i>
nānōskwipūgōtāw ⁱ	<i>it floats about at random.</i>
kāskipugōw ^a	<i>he is able to float.</i>

ā in its naked form is so vague of sense that it is almost undefinable. Its nature comes out well in the rôle of an assisting element and as such often helps to convey the idea of motion. In one instance its help brings about the definite notion of flight from danger:

kī'wāmōw ^a	<i>he flees hither and thither.</i>
pémāmōw ^a	<i>he hurries past in flight.</i>
pyä'tāmōw ^a	<i>he comes fleeing hitherward.</i>

Secondary Stems of the Coördinative Class

There is yet another class of stems that occupy a place in front of the terminal suffixed pronouns. They serve a double office: one as coördinatives between preceding stems of a purely verbal nature and following pronominal elements, the other as verbals signifying intransitive notions of existence, being, state, condition. Some express the notion feebly, others do it with more certainty. Many stand in an intimate relation with the subjective terminal pronouns, in a relation of concord and one so close that they take on different forms, some to agree with the animate, others with the inanimate. Their nature and type are shown in the examples:

-*cin*- is an animate term with much variety of use. Its essential meaning is change from motion to rest. The length of the pause can be long enough to indicate the idea of reclining, lying down:

sā'gicinw ^a	<i>he lies exposed.</i>
ātāwācinw ^a	<i>he lies on his back.</i>
kicū'wicinw ^a	<i>he lies warm.</i>

The cessation may be only momentary, like the instant respite of the foot on the ground during the act of walking. The term is translated into *step*, *walk*, in the following examples:

pémiwä'wācinw ^a	<i>it is the sound of his footstep as he passes by.</i>
pyätwä'wācinw ^a	<i>it is the sound of his walk coming home.</i>
anemwä'wācinw ^a	<i>it is the sound of his step going away.</i>

Again, the rest may be sudden, and indefinite as to duration. The meaning in this light comes out in words expressive of descent, as *fall*, *drop*:

pā'gicinw ^a	<i>(the bird) lights.</i>
pī'tācinw ^a	<i>he dropped inside.</i>
cō'skwicinw ^a	<i>he slips and falls.</i>

-*sen*- is inanimate and corresponds to -*cin*-. It is of wide use, too. It can be applied in the same examples illustrating some of the uses of -*cin*-. To indicate rest in place it is:

sā'gisèn ^w ¹	<i>it lies exposed.</i>
ātāwāsèn ^w ¹	<i>it lies wrong side up.</i>
kīcū'wisèn ^w ¹	<i>it lies in a state of warmth.</i>

It likewise expresses the notion of instant change coming from rapid contact between two bodies. As in the illustrations for *-cin-*, so in the following the idea for sound is represented by the reduplicated form of *wā*. The idea of contact and the idea of interval between one contact and another are expressed by *-sen-*:

pēmiwā'wāsèn ^w ¹	<i>it passes by a-jingling.</i>
pyātāwā'wāsèn ^w ¹	<i>it comes a-ringing.</i>
anēmāwā'wāsèn ^w ¹	<i>it goes yon way a-tinkling.</i>

Some of its uses to express descent are:

pāgisèn ^w ¹	<i>it struck, hit, fell, lit.</i>
pī'tāsèn ^w ¹	<i>it dropped inside.</i>
cō'skwisèn ^w ¹	<i>it slid and fell.</i>

-si- implies in a general way the attribute of being animate. It can almost always be rendered in English by an adjective used with the verb *be*:

mō'wesī ^w ^a	<i>he is untidy.</i>
kā'wesī ^w ^a	<i>he is rough, uneven, on the skin.</i>
cā'wesī ^w ^a	<i>he is hungry (i. e. feeble, faint by reason of being famished).</i>
kepāgesī ^w ^a	<i>he is thick of skin.</i>

-ā- is the inanimate correspondent of *si*:

mō'wāw ¹	<i>it is soiled, stained.</i>
kā'wāw ¹	<i>it is rough, unpolished, prickly.</i>
cā'cawāw ¹	<i>it is pliant, yielding.</i>
képagāw ¹	<i>it is thick.</i>

-sū- signifies that the animate subject is in a state of heat, fire, warmth:

wī'casū ^w ^a	<i>he is sweating.</i>
á'kasū ^w ^a	<i>he is burned to a crisp.</i>
pāsesū ^w ^a	<i>he is burned.</i>
kī'cesū ^w ^a	<i>he is cooked done.</i>

-tā- is the animate equivalent of sū :

wī'catāw ¹	(weather) <i>is warm.</i>
á'katāw ¹	<i>it burned to ashes.</i>
pásetāw ¹	<i>it is hot, heated.</i>
kī'catāw ¹	<i>it is done cooking.</i>

The ā of tā in the last illustration has been met before in combinations like usā *walk*, isā *flight*, ōtā *crawl*, egā *dance*, and some others. In the form of kǎ, 'kǎ, and sometimes gǎ it helps to express activity, occupation, exercise, industry. It admits of a wide range of use with the three forms, but everywhere is distinguished the idea of doing, performing :

nenúsu'kǎw ^a	<i>he is on a buffalo hunt.</i>
kepíhikǎw ^a	<i>he is making a fence (i. e., an enclosure).</i>
kōgénigǎw ^a	<i>she is washing clothes (i. e., doing work with water).</i>

There is no precise notion expressed by the vowel ā in such augmented forms as -hǎ- and -wǎ-. It is an empty sign so far as standing for an idea goes. Yet the vowel, like some others in its class, plays an important function. It helps to define the preceding stems and to connect them with the terminal pronouns. A copula might be an apt term for it, for such is its office. The following show some of its uses :

kī'wātcitǎhǎw ^a	<i>he is melancholy.</i>
ǎ'kwitǎhǎw ^a	<i>he is sullen.</i>
kī'yǎwǎw ^a	<i>he is jealous.</i>
ǎ'kwǎw ^a	<i>he is angry.</i>

The inanimate retains ā in -āmigat-. As in the animate, so in the inanimate the rendering is usually with some form of the verb *be*. The inanimate admits of a further meaning, implying something of the notion of vague extension, like prevalent tone, pervading temper, dominant state of things. Such is the essential idea that comes from the substitution of -āmigat- for the animate in the forms that have just been given :

nénusu'kǎ'migāt ¹	<i>the buffalo hunt is the all-absorbing topic.</i>
kepíhikǎ'migāt ¹	<i>everything is given over to the building of enclosures.</i>

kō'genigā'migātw ¹	<i>the place is astir with the washing of clothes.</i>
ki'wātcitāhā'migātw ¹	<i>the place is sad, dolefully sad.</i>
ā'kwitāhā'migātw ¹	<i>the air is all in a spleen.</i>
kiyāwā'migātw ¹	<i>the place is mad with jealousy.</i>
ā'kwā'migātw ¹	<i>it is aflame with anger.</i>

It is well to mention at this point an inanimate use of *-gat-*, a component element of *-āmigat-*. The form is sometimes *-gwāt-*, *-kwāt-*, or *-kwāt-*. In function it is not unlike the inanimate *-ā-*, shown a little way back as an equivalent of the animate *-si-*. Furthermore, it has a very common use of expressing ideas of vague existence in space of such things as odor, fragrance, atmospheric states of the weather:

pecigwā'kwātw ¹	<i>(tree, log, stick) is straight.</i>
mī'cāgātw ¹	<i>it is fuzzy.</i>
mēnāgwātw ¹	<i>it smells, stinks.</i>
mī'cātcīyāgwātw ¹	<i>it is fragrant.</i>
mēcā'kwātw ¹	<i>it is a clear day or starry night; literally, it is a state of immensity.</i>
negwā'na'kwātw ¹	<i>it is cloudy; more literally, a process of covering is going on above.</i>
pōsā'na'kwātw ¹	<i>clouds hang heavy, look angry; literally, a condition of enlargement, expansion, is taking place over head.</i>

The vowel *i*, in the forms *-wi-* and *-hi-*, is another element with the office of a link auxiliary. It is a common characteristic of *i*, in one or the other form, to increase or to retain the quantity of the vowel in the preceding syllable. It frequently lends emphasis to the meaning of a whole combination:

kīwātēsīhiw ^a	<i>he is so lonely.</i>
sanagēsīhiw ^a	<i>he is positively unyielding, incorrigible.</i>

The inanimate of the same is:

kīwā'tcāhiw ¹	<i>the place is so lonely.</i>
sanagātōhiw ¹	<i>it is certainly tough, formidable.</i>

Some instances show that the use of *i* is not always in agreement

with the principle of strict pronominal concord ; in other words, that it is not a peculiarity of one or the other gender :

mé'tōsānēnīhīw ^a	<i>he is mortal, exists as a mortal.</i>
wāwānēs-kāhīw ^a	<i>he is bad, lives an evil life.</i>
mé'tōsānēnīhīw ⁱ	<i>it is in nature mortal.</i>
wāwānēs-kāhīw ⁱ	<i>it has the stamp of evil on it.</i>

A common use of *i* conveys the idea of entrance into a state or of becoming a part of a condition :

mānetōwīw ^a	<i>he takes on the essence of supernatural power, is supernatural power itself (personified).</i>
ugīmāwīw ^a	<i>he becomes chief.</i>
mānetōwīw ⁱ	<i>it is charged with, is possessed of, supernatural power ; it becomes the supernatural power itself.</i>
ugīmāwīw ⁱ	<i>it partakes of the nature of sovereignty.</i>

Groups of Ideas Expressed or Conveyed by Stems

It is not possible yet to distinguish exactly the groups of ideas expressed by initial stems and the groups of ideas conveyed by each class of secondary stems. It seems that, on the whole, initial stems predominate in the expression of subjective activities and that they more definitely perform the function of verbs, while on the other hand secondary stems are more intimately concerned with the objective relations. It is true that both initial and secondary stems sometimes refer to similar notions, like movement and space ; but it is possible to observe a distinction in the nature of the reference. A great many initial stems define movement with reference to a particular direction, as hither, thither, round about ; secondary stems, on the other hand, indicate movement, as slow, swift, or as changing to rest. Secondary stems denoting space seem to lack extension in the sense they convey, as top, cavity, line, and terms indicating parts of the body ; initial stems refer to space in a wide general sense, as distance, dimension, immensity, totality.

The illustrations plainly indicate the nature of the method of composition from the standpoint of a verb in the nominative singular of the third person ; and they also show the character of the elements that enter into combination to form complete wholes. It is

observed how every stem is stamped with the quality of abstract meaning; the notion of some stems is so vague and so volatile, as they stand in detached form, as to seem almost void of tangible sense. Some stems can be analyzed into elements that have at most the feeblest kind of sense; it is only as they stand in compound form that they take on a special meaning. It is not altogether clear how these stems, so vague and subtle as they stand alone, came to convey the sensuous notions that they do when thrown together into a group; how, for example, an initial stem introduces a general notion and forms a group complete in statement but incomplete in sense, as when in composition it terminates with only a pronominal ending. Yet such a group can be of sufficiently frequent use as to become an idiom; in that case it takes on an added sense which is due not so much perhaps to the inherent meaning of the combined stem and pronoun as to an acquired association with a particular activity. The psychological peculiarity of the process is more marked in the wider developments, as when initial and secondary stems combine for the larger groups. The components seem to stand toward each other in the position of qualifiers, the sense of one qualifying the sense of another with an effect of directing the meaning toward a particular direction. But whatever be the influence at work, the result is a specialization of meaning, not only of the single member in the group but of all the members as they stand together with reference to one another. The stems seem charged with a latent meaning which becomes evident only when they appear in certain relations; out of those relations they stand like empty symbols. It is important to emphasize the fact that the order of stems in a group is psychologically fixed. Initial stems precede and secondary stems follow after, not with a freedom of position and not in a haphazard manner, but with a consecutive sequence that is maintained from beginning to end with firm stability.

A general summary of the process can thus be put in illustration: *pōni* is an initial stem signifying *no more, no longer*; its original sense comes out best by adding the terminal animate pronoun and making *pōnīwa*; the group means that one has previously been engaged in an activity and has now come into a state of

cessation, making altogether a rather vague statement, as it stands unrelated to anything else; but travel has made a figure of speech of it, and so it has come to be the particular idiom for *one camps, one goes into camp*. So much for the simpler form of a combination.

Pag- is an initial stem with the general sense of striking against something; *-ā'kw-* is a secondary stem of the first class denoting resistance, and so *pagā'kw-* is to strike against a resistance. The stem *-tun-* is a mobile secondary member of the first class denoting the special notion of place about a cavity and has become a special term indicating the place about the mouth; and so *pagā'kwitūnā-* is 'to strike against a resistance at a point on the mouth.' Again, *-cin-* is a secondary stem of the second class and refers to change from motion to rest, but leaves the character and the duration of the change to be inferred from the implications of the stems that precede; furthermore, it indicates that the performer is animate, and serves as a link between the terminal pronoun and what precedes; and so *pagā'kwit'ūnācinw^a* is a definite statement meaning that 'one strikes against a resistance and is brought for a time at least to a condition of rest.' 'He bumps himself on the mouth,' or 'he bumps his mouth,' would be two ways of putting the same thing in English.

Instrumental Particles

A set of elements denoting different notions of instrumentality incorporate after initial stems and after secondary stems of the first class. They introduce a causal relation and render verbs transitive. Their nature and type come out in the illustrations.

-h- is for instrumentality in general:

<i>kāskahām^a</i>	<i>he accomplishes an act with the aid of means.</i>
<i>pānahām^a</i>	<i>he failed to hit it with what he used.</i>
<i>hāpīnahām^a</i>	<i>he unloosed it by means of something.</i>

-h- often gets so far away from its instrumental significance as to be absorbed by a general causal idea:

<i>kīwā'mohāw^a</i>	<i>he puts them to wild flight.</i>
<i>mānēcīhāw^a</i>	<i>he disgraces him.</i>
<i>nī'cwiḥāw^a</i>	<i>he owns two (animate objects).</i>

The instrumental form is frequently *-hw-* instead of *-h-* :

pī'tahwāw ^a	<i>he buries him.</i>
pā'guh ^a wāw ^a	<i>he makes him run.</i>
pōtci'gwāhwāw ^a	<i>he pierced him in the eye with something.</i>

-n- refers to the instrumentality of the hand :

nō'tānām ^a	<i>he falls short of reaching it with his hand.</i>
pānenām ^a	<i>he failed to hold it with the hand.</i>
atā'penām ^a	<i>he takes hold of it with the hand.</i>

The use of *-n-* is so common that its symbolism gets pretty far from its original meaning. In some instances *-n-* refers just as much to mechanical means in general as it does to hand :

nā'nāw ^a	<i>he goes to fetch him.</i>
ā'wanāw ^a	<i>he carries him away.</i>
mécenāw ^a	<i>he catches him.</i>

And in other instances the notion of hand becomes obscure :

mānéwānāw ^a	<i>he loves her as a lover.</i>
tāpānāw ^a	<i>he is fond of her as a lover, friend, or relative.</i>
kānōnāw ^a	<i>he talks to her.</i>

-sk- expresses the doing of an act with the foot or leg :

tāgeskām ^a	<i>he kicks it.</i>
tā'geskām ^a	<i>he touches it with the foot.</i>
patā'ketcā'skawāw ^a	<i>he spurs him in the side; literally, he pierces him in the side with the foot.</i>

-p-, *-pu-*, or *-pw-* denotes an act done with the mouth :

sāgi'pwāw ^a	<i>he bites him, i. e. he takes hold of him with the mouth.</i>
sāgi'putōw ^a	<i>he bit it.</i>
kī'ckikūmā'pwāw ^a	<i>he bites off his nose.</i>
pō'tetúnā'pwāw ^a	<i>he kisses her.</i>

-c-, *-cw-*, or *-sw-* signifies an act done with something sharp :

pé'tecōw ^a	<i>he cut himself accidentally (with a knife).</i>
kīskānōwācwāw ^a	<i>he cut off the (animal's) tail.</i>
kī'skecām ^a	<i>he cut it off.</i>
kīskécāswāw ^a	<i>he cut off (another's) ear.</i>

The association of the two ideas of something sharp and something thin and film-like affords an explanation why *c* refers not only to the ear but also to the notion of the ear as an instrument; usually, however, in an intransitive sense:

pésecâw ^a	<i>he listens.</i>
nanā'tucâw ^a	<i>he asks questions, i. e. he seeks with the ear.</i>

Farther back was shown a number of attributive elements indicating activities with reference to one or the other gender. The elements were preceded by certain consonants which had much to do with indicating the gender of what followed. There is an analogous process in causal relations. Certain consonants precede pronominal elements in much the same way as the instrumental particles that have just been shown. These consonants serve as intervocalics and at the same time point out the gender of what follows. A very common consonant is *m*, which precedes incorporated animate pronominal elements in the objective case. It sometimes means 'doing something with the voice,' the act being done with reference to an animate object:

pō'nimâw ^a	<i>he stops talking to him.</i>
tanwä'wämâw ^a	<i>he quarrels with him; literally, he engages in repeated noise with him.</i>
kâskimâw ^a	<i>he gains her by persuasion.</i>

Corresponding with *m* on the inanimate side is *t* or 't, but the use appears there in a different sense:

pō'ni'tôw ^a	<i>he stops doing it.</i>
tanwä'wä'tôw ^a	<i>he bangs away on it.</i>
kâski'tôw ^a	<i>he gets it, he buys it.</i>

It is not always certain if the symbol stands for a genuine instrumental. Its causal force is so indefinite at times as to represent no other function than to make an animate verb transitive:

wâ'bamâw ^a	<i>he looks at him.</i>
pâgamâw ^a	<i>he hits him.</i>
mī'kemâw ^a	<i>he is occupied with (an animate object).</i>
	<i>It is the idiom for he woos her, he attends him (in sickness).</i>

The parallel of the same thing with *t* and the inanimate would be:

wá'batámw ^a	<i>he looks at it.</i>
pága ^t támw ^a	<i>he hits it.</i>
mí'ketámw ^a	<i>he is busy with it.</i>

Another frequent consonant, indicating that the following vowel represents an animate object, is *s*:

kúsáw ^a	<i>he fears him.</i>
ásáw ^a	<i>he owns something animate.</i>

In the inanimate, *t* replaces *s*:

kú ^t támw ^a	<i>he fears it.</i>
á ^t tōw ^a	<i>he has it.</i>

It was shown that *n* referred to activity with the hand. The reference was clear when the object was animate, as:

pyä'näw ^a	<i>he fetches him</i> ; literally, he comes, bringing him with the hand.
nä'näw ^a	<i>he goes to fetch him with the hand.</i>

The instrumental notion of the hand is sometimes lost when the object of the activity is inanimate. In that case *t* replaces *n*:

pyä' ^t tōw ^a	<i>he fetches it.</i>
nä' ^t tōw ^a	<i>he goes to fetch it.</i>

SUBSTANTIVE

It may be well to close the paper with a brief mention of the substantive. A pure substantive in the strict sense of the word is wanting in the language of this Algonquian dialect. What is here termed a substantive is only part of that. It will be seen in the examples to follow that the composition of a so-called substantive group is not at all unlike that of a verb. Initial and secondary stems combine in the same kind of way; link stems also fall in line; and the element to indicate the notion of a specifier is a sort of designating suffix that is susceptible of a comprehensive application. The suffix in turn ends with one or the other of the pronominal signs to show which gender the word is, *a* for the animate and *i* for the inanimate. Often there is no designative suffix at all, but merely a pro-

nominal termination to mark the end of the word and leaving the idea of a substantive to be inferred from the context. In the illustrations of noun composition only the absolute form of the nominative is given and under the component parts of secondary stems and suffixes :

Secondary Stems

-ā kw- met with before in another connection and meaning mass usually in linear dimension and referring to *wood, tree*. It conveys much the same meaning in the noun :

méciwā ^a kw ^a	<i>dead fallen tree</i> . Initial <i>meci-</i> really means <i>large</i> .
māgā ^a kwā ^a k ⁱ	<i>tree of large girth</i> . Initial <i>mag-</i> means <i>large</i> .
mā'ckwā ^a kw ⁱ	<i>red stem</i> , the name of a medicinal plant. <i>mäck-</i> is for <i>meck-</i> , <i>blood</i> or <i>red</i> .
pémitā ^a kw ⁱ	<i>collar-bone</i> . Initial <i>pemi</i> gives the spatial notion of <i>side, by, lateral</i> .

-ōtā- is probably akin to the same form met with in the verb and denoting *crawl*. It has no such specific meaning in the noun, but refers in a general way to human interests, especially in an objective relation :

mégō'tāwēn ⁱ	<i>dress of a woman</i> . <i>meg-</i> is an initial stem and is expressive of <i>cover</i> .
mēsōtāw ⁱ	<i>rain, wind, rumor, news, the whole world</i> . <i>mes-</i> is an initial stem signifying <i>totality</i> .
ūtōtām ^a or utō'tāmān ⁱ	<i>his eldest brother, his guardian, his master, his clan tutelary, his giver of supernatural power</i> .
ō'tāwēn ⁱ	<i>town</i> , probably belongs to the class.

-nā k- refers to the spatial notion of *top, crest, apex* :

kā'watānā ^a kē ⁱ	<i>brittle top</i> , the name of a medicinal plant. <i>kāw-</i> gives the notion of <i>roughness, asperity</i> .
mäckwānā ^a kē ⁱ	<i>red top</i> , the name of a plant used for medicine. <i>mäckw-</i> is for <i>red</i> .

-ōtc- or *-ōt-* conveys the idea of latency and refers to something used for a purpose. The *-ō-* is the same met with before as denoting the notion of passive conveyance :

tēsōtc ⁱ	<i>trap</i> . Initial <i>tes-</i> signifies to <i>entrap</i> .
ācamōtc ⁱ	<i>bait</i> . <i>ācam-</i> is to <i>give to eat</i> .

nā'neskwäputcī¹ *dart*; *nāne-* is to *poise*, *nāneskwā* is to *poise by the neck*, *nāneskwāp* is to *poise by a notch in the neck* which is done by a knot at the end of a string used in throwing the dart.

-pyā-, a term incapable of specific definition. It denotes something of the vagueness implied in words like *essence*, *quality*, *condition*:

kī'wāpyā¹ *crawling vine*; literally, a something with the attribute of movement almost anywhere about. *kīw-* is for indefinite movement or space.

kīcō'pyātāg¹ *hot water*. The notion of warmth comes from the initial *kīc-* and helped by *-iā-*. The objective idea of water is transferred to the acquired condition; and the term signifying the new state stands for water, although it does not mean water, a common process peculiar to the psychology of the language.

-gi- or *-ge-* expresses the idea of similarity, resemblance. With the connective *ā*, as *-āgi-* or *-āge-*, it is used to represent the idea for some kinds of cloth:

mānetōwāgēn¹ *like the mysterious*, the name of an expensive broadcloth used for leggings and breech-clout.

méckwāgēnw¹ *like the red*, the name of a red woolen broadcloth with white edge.

cō'skwāgī¹ *like the smooth*, a fine woolen broadcloth used for garments by women on ceremonial occasions.

-pā'k- refers to the external structure of a dwelling:

pémitōpā'kw¹ *side* of a lodge.

tcā'pā'kwān¹ *wall* of a lodge. Initial *tcā-* refers to interlocation.

a'kwitapā'kw¹ *roof* of a lodge. *ā'kw¹* is *on top*, *surface*.

Nominal Suffixes

The examples from this point on to the end contain formatives that make a combination take on more of the character of a substantive. The stems that precede the formatives stand in a kind of attributive relation:

-*ask-* is a generic term for plants and herbs and is common in the names for medicines :

tanétiwaskw ¹	<i>gambling medicine</i> . The idea of gambling comes out in <i>taneti</i> , which expresses the notion of mutual activity.
mīcātcinénīwaskw ¹	<i>perfume</i> . <i>mic</i> is for <i>large</i> ; <i>mīcāt</i> for the state of largeness; <i>mīcātcinenī</i> is for man in a feeling of largeness.
wā'basqw ¹	<i>white medicine</i> ; <i>wāb-</i> gives the meaning for <i>white</i> ; it also means <i>to look at</i> .

-*āp-* appears in combinations denoting *cord, string* :

mē'tegwāp ¹	<i>bow-string</i> ; <i>mē'tegw¹</i> is the word for <i>wood, stick</i> .
atū'sitāp ¹	<i>moccasin string</i> ; the part in - <i>ūsi-</i> is related to the stem - <i>usā-</i> , <i>walk</i> .
āsapāp ¹	<i>string, thread, cord</i> .

-*min-* is a collective term for *fruit, grain, berry* :

mēcīmin ^a	<i>apple</i> ; literally, <i>large fruit</i> .
ādāmin ^a	<i>corn</i> .
wā'bimin ¹	<i>white corn</i> .
adā'imin ¹	<i>strawberry</i> ; literally, <i>heart berry</i> .
kā'wimin ^a	<i>gooseberry</i> ; literally, <i>prickly, rough, or thorny berry</i> .

-*pō-* or -*āpō* refers to *fluid, liquid* :

népōp ¹	<i>soup</i> ; <i>nép¹</i> is for <i>water</i> .
māciskiwāpōw ¹	<i>tea</i> ; literally, <i>herb-drink</i> or <i>herb-fluid</i> .
wickūpāpōw ¹	<i>wine</i> ; literally, <i>sweet fluid</i> .
maskutā'wāpōw ¹	<i>whiskey, rum, alcohol</i> ; literally, <i>fire-fluid</i> .

-*mutā-* is a general term for receptacle as the notion is expressed in *pocket, pouch, bag* :

mīcīmutā ³¹	<i>paunch</i> ; <i>mic</i> is for <i>littleness, shortness</i> as in <i>fuzz</i> , and so <i>fuzzy pouch</i> .
māskīmutā ³¹	<i>bag, sack</i> ; <i>maski-</i> as in <i>mā'skiskiw¹</i> is for <i>grass, reed</i> , and so <i>reed bag, grass bag</i> .
kā'kīmutā ³¹	<i>bag made from linn-wood bark</i> ; <i>kā'k-</i> is <i>to dry, season</i> , and so a <i>bag of seasoned material</i> .

pīcā'ganimutā¹ *parflèche*; pī'cāgān¹ is for *rawhide*, and so *rawhide pouch*.

-*gan*- is a comprehensive term expressive of instrumentality :

kepanō'higān¹ *lid* for a bucket, basket; *kep-* is to *enclose*, -*an*- is *opening*, and so *an object for closing an opening*.

ke'patcihigān¹ *lid, cork* for small opening as in a bottle.

kepi'higān¹ *fence*.

kā'wipūtciḡān¹ *file*; kāwi- is *rough, serrated*, and -*pu*- or -*put*- is *bite*, and so *an indented tool for taking hold*.

apwā'tciḡān¹ *scaffold* for roasting and drying meat; *apwā-* is to *roast*, and so *a thing for roasting*.

-*gan*- is a common element for many nouns denoting parts of the body :

mī'setūnāgān¹ *mustache, beard*; mīs- is for *hair, fuzz*; -*tun*- is for the *mouth, lips*, and so the *hair or thread-like arrangement about the mouth*.

uwī'piḡān¹ *marrow*; -*wip*- is for *form* and vaguely implies *length* and *roundness*.

ū'kwāgān¹ *neck*; -*kwā*- is for the *space back of the neck*.

-*nā*- refers in a general way to place and is used to denote an inhabited region or community :

Cā'wanō'ināw^a *Shawnee village*; Cā'wanōw^a a *Shawnee*.

Wacā'cināw^a *Osage town*; Acāca an *Osage*.

Ō'tcipwā'hināw^a *Ojibwa country*; Ō'tcipwāw^a an *Ojibwa*.

With the locative ending -*gi*, as -*nāgi*, the meaning becomes more of *country, land* :

acā'hināg¹ *in the country of the Sioux*; Acā^a a *Sioux*.

ki'gāpō'hināg¹ *in the Kickapoo country*; Ki'gāpōw^a a *Kickapoo*.

-*gān*- is another collective term for *place*. It refers especially to enclosures :

adā'wāgān¹ *store*; adāwā- is to *sell*, and so *selling place*.

asénigān¹ stone house; āsen¹ is stone.

pá'kwaigān¹ flag-reed lodge; pá'kwa¹ is flag-reed or flag-reed mat.

There is one suffix that imparts an abstract meaning to a combination; it is analogous in meaning to ā'wahin¹, a demonstrative pronoun with an indefinite sense of vague reference, allusion, and having a close parallel to the colloquial "What d'ye call it?" The suffix appears in slightly varying forms as -in-, -win-, -wen-, -ān-, -wān-, -ōn-:

ápapin¹ chair, seat; ap- is to sit, and so something to sit on.

kánawin¹ word, talk, report; kan- is to talk, and so something about talk.

mī'tciwēn¹ food; mī- or mīt- is to eat, and so something to eat.

págān¹ hickory-nut; pag- is to hit, alight, and so something to drop and hit.

pī'tanwān¹ quiver; pī- or pīt- is to put into, -an- is receptacle, and so an object to contain something inside.

wā'bāmōn¹ mirror; wāb- is to look at, and so something to look at.

These few examples are perhaps enough to give an idea of noun structure. As in the verb, so in the noun there is much the same general character of vague implication in the component parts when they stand alone. They offer no definite meaning by themselves, it is only as they enter into combination that they convey specific sense to the mind. The moment they fall into composition they acquire the force of precise statement which they hold within definite limits. The method of procedure is to advance progressively from one general notion to another, each qualifying the other with the result of a constant trend toward greater specialization.

